

Factor Formulas

The table below summarizes the equivalency factors. The *Name* column shows the traditional names for the factors. Each factor has a formula that depends on i , the interest rate per compounding period, and N , the number of compounding periods in the interval. The factors are valid for i strictly greater than zero and N integer.

Factor	Name	Formula	Purpose
$(F/P, i, N)$	Single payment compound amount factor	$(1+i)^N$	Moves a single payment to N periods later in time
$(P/F, i, N)$	Single payment present worth factor	$\frac{1}{(1+i)^N}$	Moves a single payment to N periods earlier in time
$(A/F, i, N)$	Sinking Fund factor	$\frac{i}{(1+i)^N - 1}$	Takes a single payment and spreads into a uniform series over N earlier periods. The last payment in the series occurs at the same time as F .
$(F/A, i, N)$	Uniform Series Compound Amount factor	$\frac{(1+i)^N - 1}{i}$	Takes a uniform series and moves it to a single value at the time of the last payment in the series.
$(A/P, i, N)$	Capital Recovery Factor	$\frac{i(i+1)^N}{(1+i)^N - 1}$	Takes a single payment and spreads it into a uniform series over N later periods. The first payment in the series occurs one period later than P .
$(P/A, i, N)$	Uniform Series Present Worth Factor	$\frac{(1+i)^N - 1}{i(i+1)^N}$	Takes a uniform series and moves it to a single payment one period earlier than the first payment of the series.
$(P/G, i, N)$	Arithmetic Gradient Present Worth Factor	$\frac{(1+i)^N - iN - 1}{i^2(1+i)^N}$	Takes an arithmetic gradient series and moves it to a single payment two periods earlier than the first nonzero payment of the series.
$(A/G, i, N)$	Arithmetic Gradient to Uniform Series Factor	$\frac{(1+i)^N - iN - 1}{i(1+i)^N - i}$	Takes an arithmetic gradient series and converts it to a uniform series. The two series cover the same interval, but the first

			payment of the gradient series is 0.
--	--	--	---